

CALIFORNIA ENERGY COMMISSION
Power Factor Correction System
CB Richard Ellis Building Project Summary

Project Description:

A Power Factor Correction System was installed on the two main electrical distribution panels of this 30,000 square foot high rise building in Los Angeles. The building, managed by CB Richard Ellis, had a 2138 Kilowatt summer peak demand. Its low 87% power factor also resulted in charges from the Los Angeles Department of Water & Power, reduced operating efficiency, and shortened life of equipment.

The new system increases the power factor automatically, adjusting itself to the building's changing demand conditions as needed. This maximizes savings and avoids operational problems that may occur with fixed capacitors.

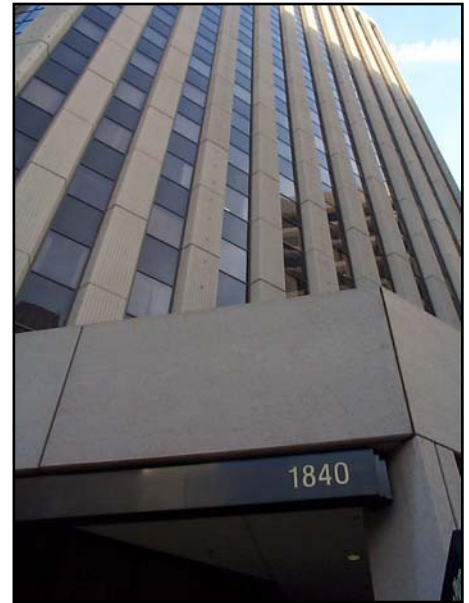
The system is guaranteed to produce a minimum 90% power factor, significantly reducing the electric company charges, line loss charges, amps and kilowatts. It also improves voltage, extends equipment life, and increases the overall system capacity.

Los Angeles Department of Water & Power's charge for low power factor is listed as a separate line item, so savings are seen directly on the bill. The property paid approximately \$13,000.00 in charges during the prior 12 months, and this figure does not include the 12.5% city sales tax. In addition, line losses and reduced operating efficiency of its HVAC and electrical equipment also increased the building's energy costs.

Project Results:

The power factor was increased to 92%, and the billing charges were reduced to approximately \$3,600.00. This represents a 72% reduction of charges, or savings of \$9,400.00. Again, these figures do not include the 12.5% city sales tax.

Using Southern California Edison's formula for calculating line losses, there is an additional \$2,800.00 in savings. As a result of the improved efficiency, an estimated 16 kilowatt reduction was realized. Although the operational and maintenance savings resulting from the increased power factor can be significant, these are not quantified in this report.



Funding Details

The Energy Commission provided a \$3,395 award toward the total project cost of \$29,900. The total estimated annual savings of \$12,200 gives the project a payback period of 26 months.

Contacts:

BOMA of Greater Los Angeles

Barbara Harris,
Executive Director
213.629.2662

Energy Innovation Group, LLC

Sidney Pelston,
Technology Advisor and Program Coordinator
213.413.8344

California Energy Commission

Bruce Cenicerros
916.653.1590